

Treatment burden experienced by people with multimorbidity: Dorset survey

James Morris

Public Health Specialty Registrar

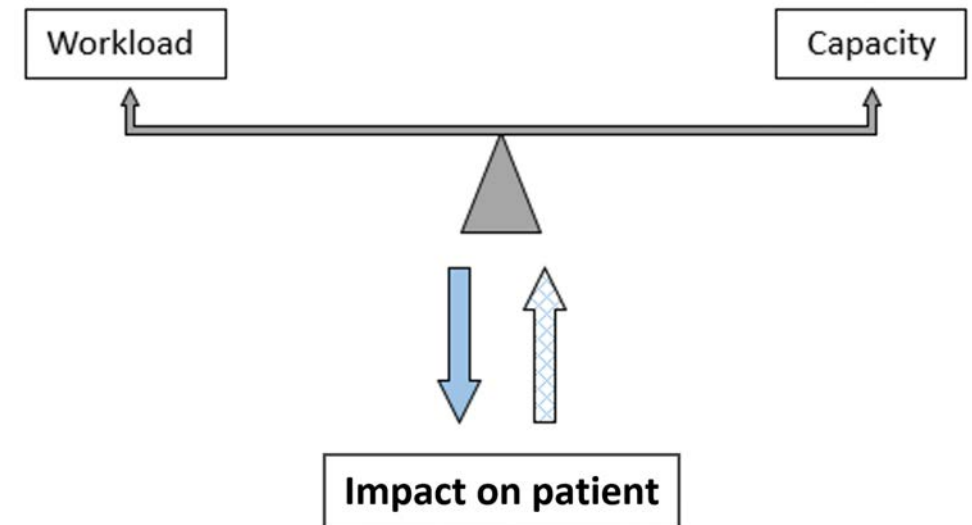
Faculty of Medicine, University of Southampton

Wessex Public Health Conference

25th March 2020

Treatment burden

- The 'work of being a patient'
- Might result from:
 - Attending many appointments
 - Taking multiple medications
 - Self-monitoring health...
- Important issue:
 - Ageing, co-morbid population
 - Single-disease treatment guidelines
 - Potential inefficiency of healthcare use
 - Negative impact on patients



Study rationale and objectives

Treatment burden at population level poorly described
Better understanding needed if we are to reduce avoidable burden

Study aim – to survey people with multiple long-term conditions in Dorset, to:

- Assess the extent and distribution of treatment burden
- Investigate factors associated with high treatment burden (and can we predict those with high burden?)
- Explore whether a single question can be used to measure treatment burden

Response to survey

- 8 GP sites recruited
- 1,983 surveys mailed out
- 835 responses (response rate \approx 42%)
- Good level of survey completion



Respondent demographics

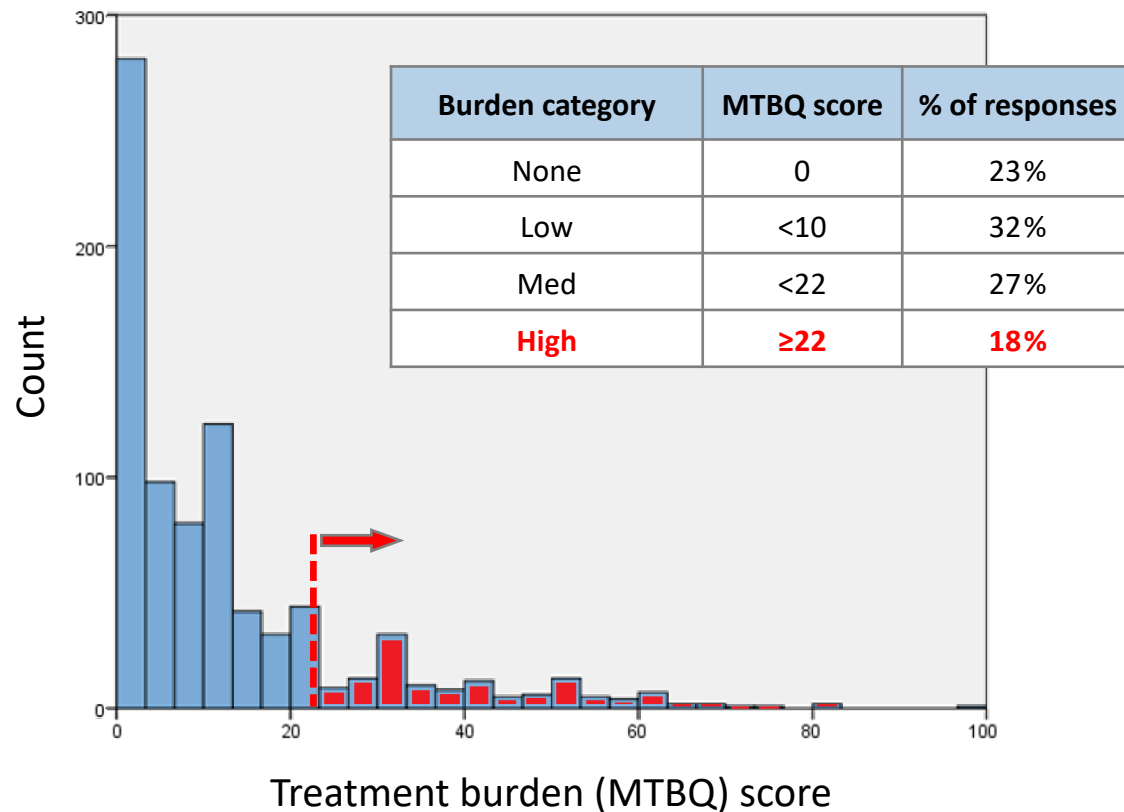
- Mean age 75y, female 54%
- 98% white

Respondent health status

- 83% prescribed 4+ meds
- Only 61% reported 3+ health conditions

Results: extent and distribution of burden

- Expected distribution of treatment burden found



- Greatest sources of treatment burden based on MTBQ item responses:
 - Making recommended **lifestyle changes** e.g. diet, exercise (47% reported difficulty)
 - **Arranging appointments** with health professionals (39% reported difficulty)

Results: associations with high burden

Factors associated with high treatment burden:

	Variable	Odds ratio for high burden	95% CI
<u>Health</u>	Medications: 7+ prescribed	1.89	1.25 – 2.88
	Long-term conditions: 4+ reported	2.41	1.66 – 3.51
<u>Person</u>	Health literacy: limited	4.08	2.61 – 6.39
	Financial difficulty with healthcare	4.63	3.08 – 6.95
<u>Services</u>	GP appointments: 3+ in last 6 months	2.55	1.68 – 3.89
	Travel time to hospital: >1 hour	1.89	0.97 – 3.68

Results adjusted for age, sex, number of conditions, and home ownership status

- Higher treatment burden also associated with **lower quality of life** (using data from 'SF-12' instrument)

Results: single-question burden screener

“On a **scale of 0-10**, where 0 is no effort and 10 is the highest effort you can imagine, how would you rate the amount of effort you have to put in to manage your health conditions?”

Please circle a number

0 1 2 3 4 5 6 7 8 9 10

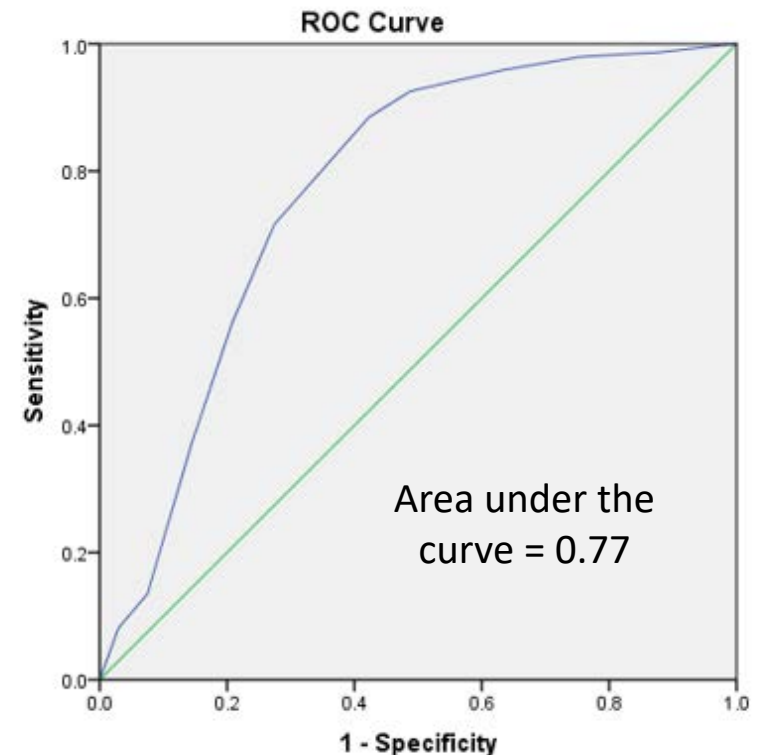
←-----→

No effort Highest effort you can imagine

Circling 5+ on the number line correlated with high t-burden (MTBQ):

- Sensitivity 89%
- Specificity 58%

Conclusion: single question better than coin-toss, but probably needs further development for use as a screening tool in primary care



So what?

- Treatment burden is important to consider, alongside symptom burden
- Progress made in identifying factors linked to treatment burden – can inform prediction
- More research needed: follow-up survey planned; consider trajectories of treatment burden

Challenge is to translate academic work into practice... findings may inform
Dorset Integrated Care System: results locally applicable

Ultimately: can we reduce avoidable treatment burden?

Clinical or individual level

- Giving greater focus to patient preferences (e.g. via guidelines): put people at the centre
- Enhancing patients' capacity to manage, alongside reducing workload

System or population level

- Providing a more joined-up health system: e.g. in arranging or combining appointments
- Consider transport links, reducing unnecessary outpatient appointments

Thank you - any questions?

Acknowledgments:

External supervision

Sam Crowe, David Phillips

Academic supervision

Simon Fraser, Paul Roderick, Lily Yao

Statistical advice

Scott Harris

References

- Treatment burden concepts, slide 1: Mair and May, *BMJ* 2014; Eton et al, *Patient Relat Outcome Meas* 2012; Tran et al, *BMC Med* 2012.
- Workload-capacity figure, slide 2: adapted from Gallacher et al, *Basicmedical Key* online; Shippee et al, *J Clin Epidemiol* 2012.
- MTBQ instrument, slide 3: Duncan et al, *BMJ Open* 2018.